

What is claimed is:

1. A semiconductor device mounting a film-like integrated circuit that is formed by separating an integrated circuit formed over a substrate from the substrate.

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2. A semiconductor device according to claim 1, wherein a thickness of a semiconductor layer constituting the integrated circuit is from 30 nm to 60 nm.

3. A semiconductor device according to claim 1, wherein a film of which thermal conductivity is $10 \text{ W/m} \cdot \text{K}$ or more is provided in order to be in contact with the film-like integrated circuit.

4. A semiconductor device according to any one of claims 1, wherein the film-like integrated circuit is electrically connected to a wiring board by a protruding electrode.

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5. A semiconductor device according to claim 4, wherein the wiring board includes a plurality of film-like integrated circuits.

20 6. A semiconductor device mounting an integrated circuit including a plurality of semiconductor layers separated in island-like,

wherein a thickness of the semiconductor layer is from 30 nm to 60 nm.

7. A semiconductor device according to claim 6, wherein a film of which thermal conductivity is $10 \text{ W/m} \cdot \text{K}$ or more is provided in order to be in contact

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with the integrated circuit film.

8. A semiconductor device according to claim 6, wherein the integrated circuit film is electrically connected to a wiring board by a protruding electrode.

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9. A semiconductor device according to claim 8, wherein the wiring board includes the plurality of integrated circuit films.

10. A semiconductor device according to claim 6, wherein the integrated circuit film is polygon.

11. A method for manufacturing a semiconductor device comprising the steps of:

forming a crystalline semiconductor film over a first substrate;

15 forming an element using the crystalline semiconductor film, a wiring for transmitting an electrical signal to the element, and an element layer comprising an insulating film;

transferring the element layer from the first substrate to a second substrate;

transferring the element layer to a sheet; and

20 manufacturing an integrated circuit film by separating the element layer.

12. A method for manufacturing a semiconductor device according to claim 11,

25 wherein the element layer is formed, and then a protruding electrode for transmitting an electrical signal to the wiring is formed before transferring the element

layer to the second substrate.

13. A method for manufacturing a semiconductor device according to claim 7, wherein a film of which thermal conductivity is $10 \text{ W/m} \cdot \text{K}$ or more is formed
5 over the element layer after transferring the element layer to the second substrate.

14. A method for manufacturing a semiconductor device according to claim 12, wherein a film of which thermal conductivity is $10 \text{ W/m} \cdot \text{K}$ or more is formed
over the element layer after transferring the element layer to the second substrate.

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